

# SAN RAFAEL DESERT MASTER LEASING PLAN

## CHAPTER 2—ALTERNATIVES

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# INTRODUCTION

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This chapter presents four alternatives for managing oil and gas leasing and development on Bureau of Land Management (BLM)-administered lands and minerals in the San Rafael Desert Master Leasing Plan (SRD MLP) area.

Under each alternative the BLM has identified leasing stipulations, lease notices, oil and gas leasing decisions, and best management practices (BMP). The BLM developed these alternatives to respond to issues raised during the public scoping process.

Oil and gas leasing stipulations include timing limitation (TL), controlled surface use (CSU), and no surface occupancy (NSO). Lands may also be closed to leasing or open to leasing subject to standard lease terms and applicable laws, regulations, and orders. Areas identified with a TL stipulation prohibit surface use during specified time periods. Areas identified with a CSU stipulation require special operational constraints. Areas identified with an NSO stipulation prohibit use or occupancy of the surface for exploration and development of oil and gas. Oil and gas resources under NSO lands may be developed by directionally or horizontally drilling from nearby lands that do not have a NSO limitation, or through inclusion in a “unitized” area which allocates production and royalties to the lease due to drainage from adjacent wells. Lease stipulations developed through this planning process would only apply to oil and gas leasing and development, not to other surface disturbing activities.

Under some alternatives, stipulations may be excepted, modified, or waived by the Authorized Officer. An exception is a one-time exemption for a particular site in a leasehold. Exceptions are determined on a case-by-case basis, and the stipulation continues to apply to all other sites in the leasehold. A modification is a change to the provisions of a lease stipulation, either temporarily or for the term of the lease. A waiver is a permanent exemption from a lease stipulation; the stipulation no longer applies in the leasehold. Exceptions, modifications, or waivers of surface stipulations would be considered in subsequent site-specific analysis. Exceptions, modifications, and waivers to lease stipulations are described in **Appendix B**.

Lease notices provide lease holders with additional information on limitations that already exist in law, lease terms, regulations, or operational orders. A lease notice also addresses special items the lessee should consider when planning operations. Lease notices that would be applied in the SRD MLP area are also included in Tables **2.1-2.9** and **Appendix B**.

BMPs are state-of-the-art mitigation measures applied on a site-specific basis to minimize or eliminate environmental or social impacts. BMPs are applied to management actions to aid in achieving desired outcomes for safe, environmentally sound resource development by preventing, minimizing, or mitigating adverse impacts and reducing conflicts. For each proposed action, as many BMPs may be applied as determined necessary to mitigate expected impacts. In some cases, operators may incorporate BMPs into individual project proposals as design features. Alternatively the BLM may incorporate BMPs into its authorizations as conditions of approval. BMPs applied to the alternatives are provided in **Appendix C**.

**Table 2–1. Air Quality**

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Objective</b> Maintain or improve existing air quality and air quality-related values (e.g. visibility) by ensuring that all authorized uses on public lands comply with and support Federal, State, and local laws and regulations for protecting air quality.				
<b>Management Actions Common To All Alternatives</b>				
AQ-1	Manage all BLM and BLM-authorized activities to maintain air quality within the thresholds established by the State of Utah Ambient Air Quality Standards and to ensure that those activities continue to keep the area as attainment, meet prevention of significant deterioration of Class I and Class II increments, and protect the air quality related values (AQRV) in the Class I air shed of the National Parks (e.g., Arches, Canyonlands, and Capitol Reef) as well as Class II areas.			
AQ-2	BLM would continue to work cooperatively with State, Federal, and tribal entities in developing air quality assessment protocols to address cumulative impacts and regional air quality issues.			
AQ-3	Project specific analyses would consider use of quantitative air quality analysis methods (i.e. modeling), when appropriate as determined by BLM, in consultation with State, Federal and tribal entities.			
<b>Management Actions By Alternative</b>				
AQ-4	No similar action.	Comply with Utah Air Conservation (UAC) Regulation R446-1. The best air quality control technology, as per guidance from the Utah Division of Air Quality (UDAQ), would be applied to actions on public lands as needed to meet air quality standards.	Same as Alternative B.	Same as Alternative B.
AQ-5	No similar action.	Comply with UAC Regulations R446-1-4.5.3 and R307-205, which prohibit the use, maintenance, or construction of roadways without taking appropriate dust abatement measures. Compliance would be obtained through special stipulations as a requirement on	Same as Alternative B.	Same as Alternative B.

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
		new projects and through the use of dust abatement control techniques in problem areas.		
AQ-6	National Ambient Air Quality Standards are enforced by the Utah Department of Environmental Quality, Division of Air Quality (UDEQ-DAQ), with Environmental Protection Agency (EPA) oversight. When processing land use authorizations additional emission control requirements to reduce potential air quality impacts would be considered on a case-by-case basis in processing land use authorizations.	National Ambient Air Quality Standards are enforced by the Utah Department of Environmental Quality, Division of Air Quality (UDEQ-DAQ), with Environmental Protection Agency (EPA) oversight. When processing land use authorizations additional emission control requirements to reduce potential air quality impacts would be considered on a case-by-case basis in consultation with UDAQ, EPA, and other Federal agencies whose lands may be impacted by the proposal.	Same as Alternative B.	Same as Alternative B.
AQ-7	BLM would require as a Condition of Approval for Applications for Permits to Drill: <ol style="list-style-type: none"> <li>1. All new and replacement internal combustion oil and gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 grams of NOx per horsepower-hour. This requirement does not apply to oil and gas field engines of less than or equal to 40 design-rated horsepower.</li> <li>2. All new and replacement internal combustion oil and</li> </ol>	Apply a CSU stipulation throughout the planning area that requires the following to mitigate the impacts to air quality and greenhouse gas emissions: <ol style="list-style-type: none"> <li>1. All new and replacement internal combustion gas-fired field engines of less than or equal to 300 design-rated horsepower shall not emit more than 2 grams of NOx (mono-nitrogen oxides) per horsepower-hour.</li> <li>2. All new and replacement internal combustion gas-fired field engines of greater than</li> </ol>	Same as Alternative A.	Same as Alternative B.

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gram of NOx per horsepower-hour.	300 design-rated horsepower shall not emit more than 1 gram of NOx per horsepower-hour.  The Authorized Officer may modify the stated requirements in accordance with updated specifications to comply with the Clean Air Act, or as deemed necessary to ensure that the stipulation is sufficient to maintain air quality and protect AQRV in nearby national parks.		
AQ-8	No similar action.	To mitigate any potential impact that oil and gas development emissions may have on regional ozone formation, or to the extent such emissions may cause or contribute to adverse AQRV impacts (including visibility) in nearby national parks, apply a CSU stipulation across the planning area that requires the following minimum standards: <ul style="list-style-type: none"> <li>• Drill rig engines that meet Tier II or better standards, as necessary, based on air quality conditions or projections, and consistent with the most stringent EPA emissions standards that are in force at the time of installation or approval.</li> <li>• Stationary internal combustion engine standard of 2g NOx/brake horsepower-hour</li> </ul>	Same as Alternative B.	Same as Alternative B.

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
		(bhp-hr) for engines<300HP and 1g NOx/bhp-hr for engines >300 HP. <ul style="list-style-type: none"> <li>• Low-bleed or no-bleed pneumatic controller.</li> <li>• Dehydrator Volatile Organic Compound (VOC) emission controls to +95 percent efficiency.</li> <li>• Tank VOC emission controls to +95 percent efficiency equivalent to NSPS subpart 0000.</li> </ul>		
AQ-9	Apply a lease notice across the planning area to inform the lessee/operator that prior to project-specific approval, additional air quality analyses may be required to comply with the NEPA, FLPMA, and/or other applicable laws and regulations. Analyses may include dispersion modeling for deposition and visibility impacts analysis, control equipment determinations, and/or emission inventory development. These analyses may result in the imposition of additional project-specific air quality control measures.	Same as Alternative A.	Same as Alternative A.	Same as Alternative A.
AQ-10	No similar action.	Apply a CSU stipulation requiring a fugitive dust control plan for oil and gas activities that would disturb a surface area larger than 0.25 acre, or that would result in	Same as Alternative A.	Same as Alternative B.

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
		substantial increases in truck traffic on unpaved or untreated surfaces.		
AQ-11	No similar action.	To minimize impacts on air quality and AQRVs, as well as minimize emissions of greenhouse gases, apply a planning area-wide CSU that prohibits venting or open flaring of associated gas.	In the absence of a pipeline, to capture gas associated with production from an oil well, use of a combustor or other best available technologies would be required. Venting or open flaring would be prohibited except in the limited circumstances identified in the BLM's methane waste prevention rule.	In the absence of a pipeline, to capture gas associated with production from an oil well, use of a combustor or other best available technologies would be required. To minimize impacts on air quality and AQRVs, as well as minimize emissions of greenhouse gases, venting or open flaring would be prohibited except in the limited circumstances identified in the BLM's methane waste prevention rule. Evaluation of all reasonable and technically feasible gas capture technologies would be required as part of operator plan approvals. In the case of an exception, a visual screen must be used to minimize sky glow, glare, and adverse visual effects on night sky resources.

**Table 2–2. Cultural Resources**

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Objectives</b> Identify, preserve, and protect significant cultural resources and ensure that they are available for appropriate uses for present and future generations. Seek to reduce imminent threats and resolve potential conflicts from natural or human-caused deterioration or potential conflict with other resource uses by ensuring that all authorizations will comply with the National Historic Preservation Act, Section 106.				
<b>Management Actions Common to All Alternatives</b>				



Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
CUL-1	All leases may be found to contain historic properties and/or resource protected under the NHPA, American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statues and executive orders. The BLM will not approve any ground disturbing activities that may affect any such properties or resources until it completes its obligations under applicable requirements of the NHPA and other authorities. The BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized, or mitigated.			
Management Actions By Alternative				
CUL-2	No similar action.	Apply a lease notice throughout the planning area to mitigate the potential impacts to TCPs or cultural plants identified through consultation. Mitigation would be developed through further consultation with affected groups which may include measures to maintain the viewshed and intrinsic values, as well as the auditory, visual, and esthetic settings of the resources.	Same as Alternative B.	Same as Alternative B.
CUL-3	Cultural viewsheds were not addressed. This means that a lease notice requiring viewshed assessment for cultural sites may not be applied.	Apply a lease notice throughout the planning area requiring viewshed analysis for cultural sites that are eligible for inclusion on the National Register, or properties of traditional religious and cultural importance to an Indian Tribe.  If the analysis shows that the oil and gas development would have adverse effects to the historic properties, the project may require relocation or redesign.	Same as Alternative A.	Apply a lease notice throughout the planning area requiring viewshed analysis for cultural sites that are determined eligible for inclusion on the National Register when location, setting, or feeling contribute to the overall integrity of a site, or properties of traditional religious and cultural importance to an Indian Tribe.  If the analysis shows that the oil and gas development would have adverse effects to the historic properties, the project may require relocation or redesign.
CUL-4	No similar action.	Apply a lease notice to areas of high potential for cultural site	Same as Alternative B.	Same as Alternative B.

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	The potential for encountering cultural sites was not addressed. This means that a lease notice informing the operator that it may be more difficult or costly to exercise lease rights may not be applied.	occurrence, informing the lessee/operator that a higher likelihood of encountering cultural resource concerns (i.e., potential adverse effects) that may require archaeological monitoring, ethnographic data collection, data recovery, and mitigation of historic properties may be required.		

**Table 2–3. Lands with Wilderness Characteristics**

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Objective</b> Minimize impacts to lands determined by BLM to have wilderness characteristics.				
<b>Management Actions by Alternative</b>				
WC-1	<i>Richfield</i> : Manage the Dirty Devil/French Springs and Horseshoe Canyon South non-WSA lands with wilderness characteristics (identified as Natural Areas in the Richfield ROD) (Map 2-1) as NSO, no exceptions, waivers, or modifications.	Close the Dirty Devil/French Springs and Horseshoe Canyon South non-WSA lands with wilderness characteristics (identified as Natural Areas in the ROD) to leasing.	Same as Alternative A.	Same as Alternative A.

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
WC-2	<p>No similar action.</p> <p>The Price and Richfield RMPs do not include any oil and gas stipulations specific to other non-WSA lands with wilderness characteristics in the MLP area.</p>	<p>Manage all lands identified by the BLM as having wilderness characteristics during the 2016 wilderness characteristics inventory (Map 2-1) as NSO.</p>	<p>Manage lands identified as having wilderness characteristics in the Labyrinth Canyon unit as CSU.</p> <p>In this area:</p> <ul style="list-style-type: none"> <li>No disturbance would be allowed within the viewshed of the Green River.</li> <li>Well pads would be placed no closer than 320 acres apart.</li> <li>Production facilities would be co-located and designed to minimize surface impacts.</li> <li>Pipelines and utilities would be buried, to the extent practical, and placed along existing roads.</li> <li>Require interim reclamation of roadway disturbance and reclamation of well pads to well head/production facilities to minimize long-term surface disturbance.</li> <li>During final reclamation, fully restore the original landform. Travel routes would be restored to their original character.</li> </ul> <p>Manage all other lands identified as having wilderness characteristics in the planning area as open to leasing subject to standard terms and conditions.</p>	<p>Manage lands identified as having wilderness characteristics in the Labyrinth Canyon unit as NSO.</p> <p>Apply a CSU stipulation to all other lands identified by BLM as having wilderness characteristics during the 2016 wilderness characteristics inventory.</p> <p>In these areas:</p> <ul style="list-style-type: none"> <li>Well pads would be placed no closer than 640 acres (1 mile) apart.</li> <li>Production facilities would be co-located and designed to minimize surface impacts.</li> <li>Pipelines and utilities would be buried, to the extent practical, and placed along existing roads.</li> <li>Require interim reclamation of roadway disturbance and reclamation of well pads to well head/production facilities to minimize long-term surface disturbance.</li> <li>During final reclamation, fully restore the original landform. Travel routes would be restored to their original character.</li> </ul>

**Table 2–4. Oil and Gas**

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Objective</b> Provide opportunities for environmentally responsible exploration and development subject to appropriate BLM policies, laws, and regulations.				
<b>Management Actions by Alternative</b>				
<b>Oil and Gas Suspended Lease Decisions</b>				
MLE-1	Alternative A-1: Rescind the suspension on leases that are in suspension in the SRD MLP area.  Alternative A-2: Modify the terms and conditions on leases that are in suspension in the SRD MLP area to be consistent with Richfield RMP/ROD (BLM 2008b).	Modify the lease terms and conditions on the leases that are in suspension to be consistent with Alternative B.	Modify the lease terms and conditions on the leases that are in suspension to be consistent with Alternative C.	Modify the lease terms and conditions on the leases that are in suspension to be consistent with Alternative D.
<b>Lease Protest Resolution</b>				
MLE-2	Resolve lease protests and issue protested leases with terms and conditions that are consistent with the Price RMP/ROD (BLM 2008a).	Resolve lease protests and issue leases with terms and conditions that are consistent with Alternative B.	Resolve lease protests and issue leases with terms and conditions that are consistent with Alternative C.	Resolve lease protests and issue leases with terms and conditions that are consistent with Alternative B.
<b>Oil and Gas Leasing Stipulations</b>				
MLE-3	Approximately 398,957 acres would be open to oil and gas leasing, subject to standard terms and conditions.  Approximately 19,038 acres would be open to oil and gas leasing subject to CSU and TL stipulations.  Approximately 32,946 acres would be open to oil and gas leasing subject to a NSO stipulation.  Approximately 193 acres would be	Approximately 0 acres would be open to oil and gas leasing, subject to standard terms and conditions.  Approximately 97,676 acres would be open to oil and gas leasing subject to CSU and TL stipulations.  Approximately 324,508 acres would be open to oil and gas leasing subject to a NSO stipulation.  Approximately 28,950 acres would	Approximately 37,817 acres would be open to oil and gas leasing, subject to standard terms and conditions.  Approximately 362,175 acres would be open to oil and gas leasing subject to CSU and TL stipulations.  Approximately 50,949 acres would be open to oil and gas leasing subject to a NSO stipulation.  Approximately 193 acres would be	Approximately 0 acres would be open to oil and gas leasing, subject to standard terms and conditions.  Approximately 339,835 acres would be open to oil and gas leasing subject to CSU and TL stipulations.  Approximately 91,684 acres would be open to oil and gas leasing subject to a NSO stipulation.  Approximately 19,615 acres would be closed to oil and gas leasing.

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	closed to oil and gas leasing. See Map 2-2-A.	be closed to oil and gas leasing. See Map 2-2-B.	closed to oil and gas leasing. See Map 2-2-C.	See Map 2-2-D.
MLE-4	No similar action.	Close to leasing the area covered by the Three Rivers locatable mineral withdrawal.	Manage areas covered by the Three Rivers locatable mineral withdrawal as NSO.	Same as Alternative B.
MLE-5	<i>Richfield</i> : Lease split-estate lands according to BLM RMP stipulations for adjacent or nearby public lands or plans of other surface management agencies, consistent with federal laws, 43 CFR 3101, and the surface owners' rights (Min-6). <i>Price</i> : There are no stipulations related to management of split-estate lands in the SRD MLP planning area.	On split-estate lands, BLM would apply the same lease stipulations as those applied to surrounding lands with Federal surface. Mitigation measures to protect other resource values would be developed during the appropriate site-specific environmental analysis and would be attached as conditions of approval to permits in consultation with the surface owner or surface management agency.	Same as Alternative B.	Same as Alternative B.
MLE-6	<i>Richfield</i> : Subject geophysical operations under 43 CFR 3150 to the oil and gas leasing restrictions with the following exceptions: <ul style="list-style-type: none"> <li>Consider geophysical operations proposed for lands that are designated as NSO or closed to leasing for approval when (1) the circumstances or relative resource values in the areas have changed, (2) less restrictive requirements could be developed to protect the resource of concern, or (3) operations could be conducted without causing unacceptable</li> </ul>	Do not allow geophysical operations in areas closed to leasing. Only allow heliport geophysical operations in areas that are managed as NSO.	Do not allow geophysical operations in areas closed to leasing. Geophysical operations would be allowed in areas managed as NSO under the following conditions: <ul style="list-style-type: none"> <li>No new road construction or road improvements</li> <li>No staging areas</li> <li>Full reclamation of all surface disturbance</li> <li>No geophysical operations in crucial pronghorn antelope habitat from May 15 through June 15</li> </ul>	Same as Alternative C.

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	<p>impact to the resources of concern (MIN-12).</p> <p><i>Price:</i> Geophysical operations will be allowed consistent with existing regulations for geophysical exploration (MLE-12).</p>			
<b>Best Management Practices</b>				
MLE-7	<p>The Price RMP (Appendix R-14) and the Richfield RMP (Appendix 15) include a list best management practices that typically apply to oil and gas development. These measures summarized in <b>Appendix E</b>.</p>	<p>Require implementation of BMPs that minimize the potential resource impacts associated with oil and gas development (see <b>Appendix C</b> for a list of BMPs, by resource).</p>	Same as Alternative B.	Same as Alternative B.

**Table 2-5. Paleontology**

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Objective</b> Protect paleontological resources from surface-disturbing activities.				
<b>Management Actions By Alternative</b>				
PAL-1	<p><i>Price and Richfield:</i> Mitigate adverse impacts on vertebrate and significant non-vertebrate paleontological resources resulting from authorized surface disturbing actions.</p> <p><i>Price:</i> An assessment of fossil resources will be required on a case-by-case basis, mitigating, as necessary, before and during</p>	<p>Apply a CSU stipulation requiring survey and monitoring for all surface disturbing oil and gas activities in potential fossil yield classification (PFYC) 4 and 5 areas (Map 2-3).</p> <p>Where monitoring encounters vertebrate and vertebrate trace fossils during oil and gas operations, all operations must cease until the BLM Authorized Officer determines whether the site</p>	Same as Alternative B.	Same as Alternative B.

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	<p>surface disturbance.</p> <p><i>Richfield:</i> Require on-the-ground paleontological inventories prior to permitting surface disturbing activities in areas where there is a high potential to affect scientifically significant paleontological resources.</p> <p><i>Richfield:</i> Require paleontological assessments prior to permitting surface disturbing activities in areas where there is a moderate potential to affect scientifically significant paleontological resources.</p> <p><i>Richfield:</i> For all permitted actions occurring in paleontologically sensitive areas, include stipulation(s) to cover unanticipated paleontological discoveries during disturbance. This stipulation would mandate work stoppage (or avoidance), notification to the authorized officer, and protection of the material and geological context if any paleontological resources were discovered during disturbance activities. Other stipulations might be appropriate on a case-by-case basis.</p>	<p>can be avoided, protected, or must be fully excavated.</p>		

**Table 2–6. Recreation**

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Objective</b> To provide for multiple recreational uses of the public lands and sustain a wide range of recreation opportunities and potential experiences for visitors and residents, while supporting local economic stability and sustaining the recreation resource base and sensitive resource values.				
<b>Management Actions By Alternative</b>				
REC-1	No similar action.  There are no oil and gas leasing decisions specific to the Labyrinth Canyon SRMA (Map 2-4).	Manage the Labyrinth Canyon SRMA as NSO.	Manage lands in the Labyrinth Canyon SRMA as CSU. In this area: <ul style="list-style-type: none"> <li>• No disturbance would be allowed within the viewshed of the Green River.</li> <li>• Well pads would be placed no closer than 320 acres apart.</li> <li>• Production facilities would be co-located and designed to minimize surface impacts.</li> <li>• Pipelines and utilities would be buried, to the extent practical, and placed along existing roads.</li> <li>• Require interim reclamation of roadway disturbance and reclamation of well pads to well head/production facilities to minimize long-term surface disturbance.</li> <li>• During final reclamation, fully restore the original landform. Travel routes would be restored to their original character.</li> </ul>	Same as Alternative B.
REC-2	<i>Richfield</i> : Manage oil and gas leasing in the Dirty Devil/Robbers	Manage all lands in the Dirty Devil/Robbers Roost SRMA	Same as Alternative A.	Same as Alternative A.



Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	Roost SRMA (Map 2-4) (outside of the WSA) as follows: Lease VRM Class II areas and canyon rims within the viewshed of all canyons (approximately one-quarter mile) as NSO (10,382 acres). Lease the remainder of the SRMA is subject to CSU and/or timing limitations (4,647 acres).	(outside of the WSA) as NSO.		
REC-3	No similar action.	Close to leasing all lands within 1 mile of the Green River/Labyrinth Canyon Rim (Map 2-5).	Manage all lands within 1 mile of the Green River/Labyrinth Canyon Rim as NSO.	Manage all lands within 1 mile of the Green River/Labyrinth Canyon Rim that are north of the San Rafael River as NSO. Manage all lands within 1 mile of the Green River/Labyrinth Canyon Rim south of the San Rafael River as closed to oil and gas leasing and development.
REC-4	No similar action.	Close to leasing all lands within 1 mile of the Horseshoe Canyon Rim (Map 2-5).	Manage all lands within 1 mile of Horseshoe Canyon Rim as NSO.	Same as Alternative B.
REC-5	No similar action.	Manage the following recreational focus areas in the Price and Richfield ERMA as NSO (Map 2-5): <ul style="list-style-type: none"> <li>• Fossil Point</li> <li>• Dry Lake</li> <li>• Three Canyon</li> <li>• Saucer Basin/Moonshine Wash</li> <li>• The Cone</li> </ul>	Manage the following recreational focus areas in the Price and Richfield ERMA as CSU: <ul style="list-style-type: none"> <li>• Fossil Point</li> <li>• Dry Lake</li> <li>• Three Canyon</li> <li>• Saucer Basin/Moonshine Wash</li> <li>• The Cone</li> <li>• Keg Knoll</li> </ul>	Manage the following recreational focus areas in the Price and Richfield ERMA as NSO: <ul style="list-style-type: none"> <li>• Fossil Point</li> <li>• Dry Lake</li> <li>• Three Canyon</li> <li>• Saucer Basin/Moonshine Wash</li> <li>• Keg Knoll</li> <li>• Sweetwater Reef</li> </ul>

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
		<ul style="list-style-type: none"> <li>• Keg Knoll</li> <li>• Sweetwater Reef</li> <li>• Cottonwood Wash</li> <li>• Horseshoe Canyon Trailhead</li> </ul>	<ul style="list-style-type: none"> <li>• Sweetwater Reef</li> <li>• Cottonwood Wash</li> <li>• Horseshoe Canyon Trailhead</li> </ul> <p>In these areas:</p> <ul style="list-style-type: none"> <li>• Well pads would be placed no closer than 160 acres apart.</li> <li>• Production facilities would be co-located and designed to minimize surface impacts.</li> <li>• Pipelines and utilities would be buried, to the extent practical, and placed along existing roads.</li> <li>• Require interim reclamation of roadway disturbance and reclamation of well pads to well head/production facilities to minimize long-term surface disturbance.</li> <li>• During final reclamation, fully restore the original landform. Travel routes would be restored to their original character.</li> </ul>	<ul style="list-style-type: none"> <li>• Horseshoe Canyon Trailhead</li> </ul> <p>Manage the following recreational focus areas in the Price and Richfield Extensive Recreation Management Areas as CSU:</p> <ul style="list-style-type: none"> <li>• The Cone</li> <li>• Cottonwood Wash</li> </ul> <p>In these areas:</p> <ul style="list-style-type: none"> <li>• Well pads would be placed no closer than 640 acres (1 mile) apart.</li> <li>• Production facilities would be co-located and designed to minimize surface impacts.</li> <li>• Pipelines and utilities would be buried, to the extent practical, and placed along existing roads.</li> <li>• Require interim reclamation of roadway disturbance and reclamation of well pads to well head/production facilities to minimize long-term surface disturbance.</li> <li>• During final reclamation, fully restore the original landform. Travel routes would be restored to their original character.</li> </ul>
REC-6	No similar action.	<p>Manage all lands within 3 miles of the following key observation (Map 2-6) points as NSO:</p> <ul style="list-style-type: none"> <li>• Keg Knoll</li> </ul>	<p>Manage all lands within 1 mile of the following key observation points as NSO:</p> <ul style="list-style-type: none"> <li>• Keg Knoll</li> </ul>	<p>Manage all lands within 1 mile of the following key observation points as NSO:</p> <ul style="list-style-type: none"> <li>• Keg Knoll</li> </ul>

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
		<ul style="list-style-type: none"> <li>• Wolverton Overlook</li> <li>• Horseshoe Canyon Trailhead</li> <li>• Trin Alcove/Three Canyon</li> <li>• Bull Bottom</li> </ul>	<ul style="list-style-type: none"> <li>• Wolverton Overlook</li> <li>• Horseshoe Canyon Trailhead</li> <li>• Trin Alcove/Three Canyon</li> <li>• Bull Bottom</li> </ul>	<ul style="list-style-type: none"> <li>• Wolverton Overlook</li> <li>• Horseshoe Canyon Trailhead</li> <li>• Trin Alcove/Three Canyon</li> <li>• Bull Bottom</li> </ul> <p>Manage all lands between 1-3 miles from the following key observation points as CSU:</p> <ul style="list-style-type: none"> <li>• Keg Knoll</li> <li>• Wolverton Overlook</li> <li>• Horseshoe Canyon Trailhead</li> <li>• Trin Alcove/Three Canyon</li> <li>• Bull Bottom</li> </ul> <p>Prior to authorizing any surface disturbing activities, a viewshed analysis will be completed from all applicable key observation points. If an area is determined to be within the viewshed, a visual resource contrast rating, including visual simulations, would be completed in accordance with BLM Manual 8431. Site-specific mitigation measures would be identified for all disturbances that are visible within 3 miles that minimize visual impacts, regardless of the area's visual resource management class.</p>
REC-7	No similar action.	<p>Manage all lands within 3 miles of the following travel corridors as NSO:</p> <ul style="list-style-type: none"> <li>• Lower San Rafael Road from Hwy 24 to Horseshoe Canyon</li> </ul>	Same as Alternative A.	<p>Manage all lands within 1 mile of the following travel corridors as NSO.</p> <ul style="list-style-type: none"> <li>• Lower San Rafael Road from Saucer Basin Road to</li> </ul>

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
		<ul style="list-style-type: none"> <li>Lower San Rafael Road from Green River to Horseshoe Canyon (Map 2-7-B)</li> </ul>		<p>Horseshoe Canyon.</p> <ul style="list-style-type: none"> <li>Lower San Rafael Road from the San Rafael River to Horseshoe Canyon (Map 2-7-D).</li> </ul> <p>Manage all lands between 1-3 miles from the following travel corridors as CSU.</p> <ul style="list-style-type: none"> <li>Lower San Rafael Road from Saucer Basin Road to Horseshoe Canyon.</li> <li>Lower San Rafael Road from the San Rafael River to Horseshoe Canyon</li> </ul> <p>Prior to authorizing any surface disturbing activities a viewshed analysis will be completed from all applicable travel corridors. If an area is determined to be within the viewshed, a visual resource contrast rating, including visual simulations, would be completed in accordance with BLM Manual 8431. Site-specific mitigation measures would be identified for all disturbances that are visible within 3 miles that minimize visual impacts, regardless of the area's visual resource management class.</p>
REC-8	No similar action.	<p>In order to minimize impacts to night skies, apply a planning area-wide CSU stipulation requiring operators to:</p> <ul style="list-style-type: none"> <li>Limit the use of artificial lighting during nighttime</li> </ul>	Same as Alternative A.	Same as Alternative B.

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
		<p>operations to only those that are determined necessary for safety.</p> <ul style="list-style-type: none"> <li>• Utilize shielding and aiming techniques as well as limiting the height of light poles to reduce glare and avoid light shining above horizons.</li> <li>• Direct lights downward onto the task area. The bottom surface of the light fixture should be level, or if unable to be fully level, point it as close to straight down as possible or shield it to avoid light being projected horizontally.</li> <li>• Use motion sensors, timers, or manual switching for areas that require illumination, but are seldom occupied.</li> <li>• Reduce lamp brightness and select lights that are not broad spectrum or bluish in color.</li> </ul>		

**Table 2–7. Special Designations**

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
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Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
Areas of Critical Environmental Concern				
<b>Objective</b> Manage ACECs to protect and prevent damage to the relevant and important values such as historic, cultural, scenic, fish and wildlife, and natural systems or processes.				
Management Actions Common to all Alternatives				
ACEC-1	The Big Flat Tops ACEC (190 acres) is managed as closed to oil and gas leasing and development (Map 2-4).			
Management Actions by Alternative				
ACEC-2	The Dry Lake Archeological District ACEC (Map 2-4) is open to leasing subject to major constraints (NSO).	Same as Alternative A, except no exceptions, waivers, or modifications.	Same as Alternative B.	Same as Alternative B.
ACEC-3	The Uranium Mining District ACEC (Tidwell Draw) (Map 2-4) is open to leasing subject to major constraints (NSO).	Same as Alternative A.	Manage the Tidwell Draw site in the Uranium Mining District ACEC as open to leasing subject to minor constraints (CSU).  Do not allow surface disturbing activities that adversely impact the physical evidence of past mining activities.  Apply a lease notice to inform the lessee/operator that compensatory mitigation may be required for all disturbances in the ACEC.  Mitigation may include restoration of historic sites, conducting oral histories, or development of interpretive/educational materials.	Same as Alternative A.
National Historic Trails				
<b>Objective</b> Preserve the integrity of landscapes along the Old Spanish National Historic Trail (OSNHT) on public lands within the planning area.				
Management Actions by Alternative				
TRA-1	Oil and gas leasing will be open to	Conserve, protect, and restore the	Apply a lease notice along the	Conserve, protect, and restore the

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	leasing subject to minor constraints (timing limitations, CSU, lease notices) (Map 2-4).	<p>National Trail resources, qualities, values, and associated settings.</p> <p>In order to protect the integrity of the Old Spanish Trail, manage all lands within 3 miles as NSO.</p> <p>This stipulation would apply to the congressionally designated route and to any draft refinements of this route.</p>	<p>length of the Old Spanish Trail. The lease notice, which would apply to a 2-mile width on both sides, would give notice to lessees/operators that modifications to the Surface Use Plan of Operations may be required in order to conserve, protect, and restore the National Trail resources, qualities, values, and associated settings. Additionally, coordination with the National Park Service and BLM will be necessary.</p> <p>Apply a CSU stipulation to high potential sites and route segments. The CSU stipulation would require the lessee to maintain the current setting within 2 miles of the trail.</p> <p>This lease notice and stipulation would apply to the congressionally designated route or the latest verified trail location.</p>	<p>National Trail resources, qualities, values, and associated settings.</p> <p>In order to protect the integrity of the Old Spanish Trail:</p> <p>Manage all lands within 1 mile of high potential sites and route segments as NSO.</p> <p>Manage all lands between 1-3 miles from high potential sites and route segments as CSU.</p> <p>Prior to authorizing any surface disturbance, a viewshed analysis will be completed from the Old Spanish Trail. If an area is determined to be within the viewshed, a visual resource contrast rating, including visual simulations, would be completed in accordance with BLM Manual 6280. In order to protect the historic integrity of the trail, mitigation measures would be identified that minimize visual impacts, regardless of the area's visual resource management class. In addition, coordination with trail administration (i.e., BLM and NPS) will be required.</p> <p>These stipulations would apply to the congressionally designated route or the latest verified trail location.</p>

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Wild and Scenic Rivers</b>				
<b>Objective</b> Maintain and enhance the free flowing character, preserve and enhance the outstandingly remarkable values, and allow no activities within the river corridor that will alter their classification as suitable for Congressional designation in the National Wild and Scenic River (WSR) System.				
<b>Management Actions by Alternative</b>				
WSR-1	The Green River suitable segment from the confluence of the San Rafael River to Canyonlands National Park (scenic) (Map 2-4) is managed as NSO.	Close to leasing the Green River suitable segment from the confluence of the San Rafael River to Canyonlands National Park (scenic).	Same as Alternative A.	Same as Alternative B.

## **2-8. Soil and Water Resources**

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Objectives</b> Manage soil, water, and riparian resources to enhance ecosystem health and provide for public uses. Avoid or minimize the disturbance, loss, or degradation of soil, surface and groundwater resources, riparian areas, wetlands, and associated floodplains.				
<b>Management Actions By Alternative</b>				
<b>Soil Resources</b>				
SOL-1	No similar action.	Apply a CSU stipulation that requires use of BMPs ( <b>Appendix C</b> ) to minimize or mitigate wind erosion and emissions of fugitive dust. Areas characterized by fine sandy soils with high wind erosion potential (Map 2-8), including dune complexes, should be avoided to the extent possible. If avoidance is not possible, then operators must provide a written Plan of Development that identifies specific measures that will be implemented to effectively mitigate and prevent accelerated wind	Same as Alternative B.	Same as Alternative B.



Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
		erosion and downwind (off-site) emissions of fugitive dust. Use of wind fences or other forms of wind breaks, dust suppressants, or other methods of erosion control may be required.		
SOL-2	No similar Action.	Apply a timing limitation stipulation to saline soils in the Mancos Shale (Map 2-8). Do not allow surface disturbing activities during the period from December 1 to April 15. This restriction includes heavy equipment traffic on existing roads associated with drilling and completion operations.	Apply a timing limitation stipulation to saline soils in the Mancos Shale. Do not allow surface disturbing activities during the period from December 1 to April 15. This restriction does not include heavy equipment traffic on existing roads associated with drilling and completion operations.	Same as Alternative C.
SOL-3	<p><i>Price:</i> Any surface disturbing proposal regarding construction on slopes of 20 percent to 40 percent must include an approved erosion control strategy and topsoil segregation/restoration plan. Such construction must be properly surveyed and designed by a certified engineer and approved by the BLM prior to project implementation, construction, or maintenance (SOL-1) (Map 2-9). Allow no surface disturbance on slopes greater than 40 percent (except as allowed through exceptions, waivers, or modification as described in Appendix R-3) (SOL-2).</p> <p><i>Richfield:</i> Surface disturbing proposed projects involving construction on slopes greater than</p>	Same as Alternative A, except no exceptions, waivers, or modifications to the NSO stipulation in the Price RMP that prohibits surface disturbance on slopes greater than 40 percent.	Same as Alternative B.	Same as Alternative B.

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	30% will be avoided. If the action cannot be avoided, rerouted, or relocated then a proposed project will include an erosion control strategy, reclamation and site plan, with a detailed survey and design completed by a certified engineer. This proposed project must be approved by the BLM prior to construction and maintenance (Map 2-9).			
<b>Water Resources</b>				
WAT-1	<p><i>Richfield:</i> The BLM will continue its cooperative work with the State Division of Water Quality to monitor water quality. Water quality monitoring will be conducted at designated water quality sampling stations or chosen reaches, on a priority basis, using indicators that are chosen in coordination with the State Division of Water Quality. The State Division of Water Quality publishes a biennial report on water quality conditions in the state including a list of impaired water.</p> <p><i>Price:</i> Implement appropriate best management practices such as those found in the Utah Nonpoint Source Management Plan and other reference documents for protection, soil, water, and riparian resources.</p>	BLM would take appropriate actions to maintain water quality by working with the Utah Division of Water Quality and other agencies in accordance with the MOU regarding implementing the nonpoint source water quality program in the State of Utah. This MOU addresses the development of monitoring data and BMPs to protect water resources. The BLM would meet State and Federal water quality standards, including designated beneficial uses and anti-degradation requirements.	Same as Alternative B.	Same as Alternative B.
WAT-2	<i>Richfield:</i> Maintain buffer zones of no surface disturbance and or occupancy around natural springs	Apply an NSO stipulation to preclude oil and gas activities within public water reserves, 100-	Apply an NSO stipulation within public water reserves, 100-year floodplains, and within 330 feet of	Same as Alternative B.

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	<p>unless it can be shown that (1) there are no practical alternatives, or (2) all long-term impacts can be fully mitigated, or (3) the activity will benefit and enhance the riparian area. Base the size of the buffer zone on hydrological, riparian, and other factors necessary to protect the water quality of the springs. If these factors cannot be determined, maintain a 330-foot buffer zone from outer edge (Map 2-10).</p> <p><i>Price:</i> No surface disturbance or occupancy will be maintained around natural springs to protect the water quality or the spring. The distance will be based on geophysical, riparian, and other factors necessary to protect the water quality of the springs. If these factors cannot be determined, a 660-foot buffer zone will be maintained.</p> <p>No new surface disturbance (excluding fence lines) will be allowed in areas within the 100-year floodplain or 100 meters (330 feet) on either side from the centerline, whichever is greater, along all perennial and intermittent streams, streams with perennial reaches, and riparian areas (Map 2-10).</p>	year floodplains and within 660 feet of intermittent and perennial streams, rivers, riparian areas, wetlands, water wells, and springs.	intermittent and perennial streams, rivers, riparian areas, wetlands, water wells, and springs.	
WAT-3	No similar action. Water resources along ephemeral	Apply an NSO stipulation to preclude oil and gas activities	Apply an NSO stipulation to preclude oil and gas activities	Same as Alternative C.

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	streams were not specifically addressed. This means that a lease stipulation along ephemeral streams would not be applied.	within 100 feet of ephemeral streams (Map 2-10).	within 100 feet of ephemeral streams. An exception could be granted for road and pipeline crossings. Roads and pipelines crossing ephemeral streams would be constructed in accordance with best management practices outlined in <b>Appendix C</b> .	
WAT-4	<i>Richfield</i> : Implement appropriate BMPs designed to protect water quality for all ground disturbing activities (Appendix 14). <i>Price</i> : No similar action.	Apply BMPs to drilling operations for the protection of surface and groundwater resources ( <b>Appendix C</b> ).	Same as Alternative B.	Same as Alternative B.
WAT-5	No similar action. Shallow aquifers and potential unconsolidated aquifers were not addressed. This means that BMPs may not be applied to protect shallow aquifers and potential unconsolidated aquifers.	Apply BMPs for the protection of shallow aquifers and potential unconsolidated aquifers ( <b>Appendix C</b> ).	Same as Alternative B.	Same as Alternative B.

**Table 2–9. Special Status Species**

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Objective</b> Maintain, protect, and enhance habitats of Federally listed threatened, endangered, or candidate plant or animal species to promote recovery to the point that they no longer need protection under the Endangered Species Act. Maintain, protect, and enhance habitats of BLM Sensitive plant and animal species to prevent the listing of these species under the Endangered Species Act.				
<b>Management Actions Common To All Alternatives</b>				
SSS-1	Threatened and endangered species conservation measures and lease notices developed in consultation with USFWS would be used for all surface-disturbing activities to comply with the Endangered Species Act and BLM Manual 6840, Special Status Species Management. These species include: Mexican spotted owl, Southwestern willow flycatcher, yellow-billed cuckoo, bonytail, Colorado pikeminnow, humpback chub, razorback sucker, Jones cycladenia, and Wright fishhook cactus.			

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
SSS-2	Utah and BLM sensitive species mitigation measures and lease notices developed in consultation with the State of Utah would be used for all surface disturbing activities to comply with BLM Manual 6840, Special Status Species Management. These species include: bluehead sucker, flannelmouth sucker, roundtail chub, Jones Indigo bush, paria spurge, flattops buckwheat, trotter orexis, and hole-in-the-rock prairie clover.			
SSS-3	Colorado River Endangered Fish (Endangered) (Map 2-11): No surface-disturbing activities within the 100-year floodplain of the Green River and associated back waters would be allowed. Any exceptions to this requirement would require consultation with USFWS. Restrictions on surface disturbance within this critical habitat would be developed through this consultation process. Water depletions from any portions of the Upper Colorado River drainage basin are considered to adversely affected and adversely modify the critical habitat of the endangered fish species (bonytail, Colorado pikeminnow, humpback chub, and razorback sucker). Section 7 consultation would be completed with the USFWS prior to any such water depletions.			
SSS-4	Mexican Spotted Owl (Threatened) (Map 2-11): Prior to authorizing any surface disturbing activities, surveys would be required in potential habitat and must follow survey protocol outlined by the USFWS. Protect occupied habitat by precluding temporary activities from March 1 through August 31. Permanent actions are prohibited year-round within 0.5 mile of a PAC. If BLM determines that a proposed action may affect Mexican spotted owl (MSO) or its habitat, consultation with USFWS would be initiated.			
SSS-5	Southwestern Willow Flycatcher (Threatened): If BLM determines that a proposed action may affect Southwestern willow flycatcher (SWFL) or its habitat, consultation with USFWS would be initiated. Protect SWFL and their habitat by precluding surface-disturbing activities within a 100-meter buffer of suitable habitat year long. Activities within 0.25 mile of occupied breeding habitat would not occur during the breeding season, April 15 through August 15.			
SSS-6	Yellow-billed Cuckoo (Threatened): If BLM determines that a proposed action may affect the yellow-billed cuckoo or its habitat, consultation with the USFWS would be initiated. Protect the yellow-billed cuckoo and its habitat by precluding surface-disturbing activities within 0.25 mile of occupied habitat within riparian areas from June 15 through August 31.			
Management Actions by Alternative				
SSS-7	White-tailed Prairie Dog Habitat (Map 2-11) (Sensitive): White-tailed prairie dog surveys would be required within mapped habitat.	White-tailed Prairie Dog Habitat (Sensitive): Same as Alternative A; however, changes have been made to the exceptions, modifications, and	Same as Alternative B.	Same as Alternative B.

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	Do not allow surface disturbing activities within 660 feet of prairie dog colonies identified within prairie dog habitat. No above-ground facilities are allowed within the 660 feet buffer.	waivers criteria.		
SSS-8	Kit Fox (Sensitive): There are no stipulations or lease notices specific to kit fox. The lessee/operator is also given general notice that lands may include potential habitat for species on the Utah Sensitive Species List.	Kit Fox (Sensitive): Prior to conducting surface disturbing activities in potential habitat, kit fox surveys would be required. Preclude surface-disturbing activities within 660 feet (200 meters) of an occupied kit fox den.	Same as Alternative B.	Same as Alternative B.
SSS-9	Jones Cycladenia (Threatened) (Map 2-12): <i>Price</i> : There is no specific decision related to the Jones Cycladenia. General special status species decisions and USFWS conservation measures apply. <i>Richfield</i> : The Jones Cycladenia does not occur in the Richfield Field Office.	Jones Cycladenia (Threatened): Surveys would be required in all modeled habitat. Preclude surface-disturbing activities within 300 feet of occupied habitat.	Jones Cycladenia (Threatened): Surveys would be required in all modeled habitat where there is moderate potential for occupation. The need for surveys would be determined on a case-by-case basis by the BLM. Preclude surface-disturbing activities within 300 feet of occupied habitat.	Same as Alternative C.
SSS-10	Wright fishhook cactus (Endangered) (Map 2-12): <i>Richfield</i> : There is no specific decision related to the Wright fishhook cactus. General special status species decisions and USFWS conservation measures apply. <i>Price</i> : There is no specific decision related to the Wright fishhook	Wright fishhook cactus (Endangered): Surveys would be required in all modeled habitat. Preclude surface-disturbing activities within 300 feet of occupied habitat.	Wright fishhook cactus (Endangered): Surveys would be required in all modeled habitat where there is moderate potential for occupation. The need for surveys would be determined on a case-by-case basis by the BLM. Preclude surface-disturbing activities within 300 feet of	Same as Alternative C.

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	cactus. General special status species decisions and USFWS conservation measures apply.		occupied habitat.	
SSS-11	<p><i>Price</i>: Migratory bird nesting areas will be closed seasonally from <b>April 15 to August 1</b>. Areas with migratory birds designated as BLM Special Status Species will have the highest priority.</p> <p><i>Richfield</i>: No similar action.</p> <p>Lessees/operators are given notice that surveys for nesting migratory birds may be required during migratory bird breeding season whenever surface disturbances and/or occupancy is proposed in association with fluid mineral exploration and development within priority habitats.</p>	During nesting season for migratory birds (April 15-August 1), avoid surface-disturbing activities in occupied migratory bird habitat. Breeding season surveys would be required.	Same as Alternative B.	Same as Alternative B.
<b>Raptors</b>				
SSS-12	There are no lease stipulations for raptors. The Lessee/operator is given notice that raptor management would be guided by the use of Best Management Practices for Raptors and Their Associated Habitats in Utah (Utah BLM 2006, Appendix E “Best Management Practices for Raptors and Their Associated Habitats in Utah”), utilizing seasonal and spatial buffers, as recommend by the Utah Field Office of the USFWS (2002), as well as mitigation, to maintain and	<p>Apply seasonal restrictions (TL) and spatial buffers (CSU) on all known raptor nests in accordance with Utah Field Office Guidelines for Raptor Protection from Human and Land use Disturbances (USFWS 2002).</p> <p>In addition, operators would be required to mitigate unavoidable impacts to raptors and their habitats. The amount and type of mitigation should be based on losses in habitat value.</p>	Same as Alternative B.	Same as Alternative B.

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	enhance raptor nesting and foraging habitat, while allowing other resource uses.			
SSS-13	Bald Eagle (Sensitive): There are no lease stipulations for Bald Eagles. The lessee/operator is given notice that portions of their lease may contain Bald Eagle habitat. In Bald Eagle habitat, the lessee/operator may be required to follow avoidance and minimization measures and/or modify their Surface Use Plan of Operations to protect the Bald Eagles and/or habitat from surface disturbing activities.	See raptor stipulation above.	Same as Alternative B.	Same as Alternative B.
SSS-14	Golden Eagle (Sensitive): There are no lease stipulations for Golden Eagles. The lessee/operator is given notice that portions of their lease may contain Golden Eagle habitat. In Golden Eagle Habitat, the lessee/operator may be required to modify their Surface Use Plan of Operations to protect the Golden Eagles and/or habitat from surface disturbing activities.	See raptor stipulation above.	Same as Alternative B.	Same as Alternative B.
SSS-15	Ferruginous Hawk (Sensitive): There are no lease stipulations or notices specific to Ferruginous Hawk. The lessee/operator is also given general notice that lands may include raptor habitat and that spatial buffers will be placed on raptor nests in accordance with	See raptor stipulation above.	Same as Alternative B.	Same as Alternative B.



Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	Utah Field Office Guidelines for Raptor Protection from Human and Land use Disturbances (USFWS 2002) and Best Management Practices for Raptors and their Associated Habitats in Utah (BLM 2006).			
SSS-16	Burrowing Owl (Sensitive): There are no stipulations for burrowing owls. In burrowing owl habitat, a lease notice is applied notifying operators that modification to the Surface Use Plan of Operations may be required in order to protect the Burrowing Owl and/or habitat from surface disturbing activities in accordance with Section 6 of the lease terms, Endangered Species Act, and 43 CFR 3101.1-2.	See raptor stipulation above.	Same as Alternative B.	Same as Alternative B.

**Table 2–10. Vegetation**

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Objectives</b> Minimize impacts to vegetative communities. Control invasive and non-native weed species and prevent the introduction of new invasive species.				
<b>Management Actions By Alternative</b>				
VEG-1	<i>Richfield:</i> The use and perpetuation of native species would be emphasized. However, when restoring or rehabilitating disturbed	Native species would be use when restoring or rehabilitating disturbed areas.  In addition, Apply BMPs from	Same as Alternative A.  In addition, Apply BMPs from <b>Appendix C</b> for reclamation, soils, and noxious weeds.	Same as Alternative C.

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	<p>or degraded rangelands, non-intrusive, non-native plant species may be used where native species:</p> <ul style="list-style-type: none"> <li>• Are not available</li> <li>• Are not economically feasible</li> <li>• Cannot achieve desired future conditions, desired plan communities, or other ecological objectives as well as non-native species, and/or</li> <li>• Cannot complete with already established non-native species</li> <li>• Non-native forbs and perennial grasses could be used in preference to monocultures of non-native annuals.</li> </ul> <p><i>Price:</i> Promote the use of native plant species that are desirable for wildlife, livestock, watershed management, and other resource values while maintaining vegetation species diversity.</p>	<p><b>Appendix C</b> for reclamation, soils, and noxious weeds.</p>		
VEG-2	<p>Control noxious weed species and prevent the infestation and spread of invasive species. Develop cooperating agreements with other Federal, State, local, and private organizations to control invasive and noxious weed species.</p>	<p>Same as Alternative A.</p> <p>In addition, apply BMPs from <b>Appendix C</b> to control noxious weeds and invasive species.</p>	<p>Same as Alternative B.</p>	<p>Same as Alternative B.</p>

**Table 2–11. Visual Resources Management/Auditory Management (Soundscapes)**

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
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Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Visual Resources</b>				
<b>Objectives</b> Manage public lands in a manner that protects the quality of scenic values.				
<b>Management Actions By Alternative</b>				
VRM-1	<p><i>Price:</i> Apply a CSU stipulation for mineral leasing to all areas designated as VRM Class II. This requires all surface disturbing activities to comply with BLM Manual Handbook 8431-1 to retain the existing character of the landscape.</p> <p><i>Richfield:</i> Apply a CSU stipulation for mineral leasing to all areas designated as VRM Class II.</p> <p>Surface disturbing activities must meet the objectives VRM class II.</p> <p>The level of change to the landscape should be low; management activities may be seen, but should not attract the attention of the casual observer. Any change to the landscape must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. Surface disturbing activities that are determined to be compatible and consistent resource values are exempted.</p>	<p>Apply an NSO stipulation to all areas inventoried as VRI Class II or designated (VRM) as Class II (Map 2-13).</p>	<p>Apply a CSU stipulation for oil and gas leasing to all areas designated as VRM Class II.</p> <p>Prior to authorizing any surface disturbing activity, a visual resource contrast rating would be completed in accordance with BLM Manual 8431. Mitigation measures would be identified to retain the existing character of the landscape.</p>	<p>Apply a CSU stipulation for oil and gas leasing to all areas inventoried as VRI Class II or designated as VRM Class II.</p> <p>Prior to authorizing any surface disturbing activity, a visual resource contrast rating would be completed in accordance with BLM Manual 8431. Mitigation measures would be identified to retain the existing character of the landscape.</p>

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Auditory Management (Soundscapes)</b>				
<b>Objective</b> Manage sensitive public lands to preserve soundscapes that enhance recreational experiences.				
<b>Management Actions By Alternative</b>				
AUD-1	No similar action. Auditory management was not specifically addressed. This means that BMPs or lease stipulations would not be applied to protect natural soundscapes.	Apply a planning area-wide CSU stipulation requiring that noise levels from production equipment do not exceed 45 decibels as measured at 350 feet from the source. Mitigate noise levels so there is no change in the natural ambient sound as recorded in Canyonlands National Park or Glen Canyon National Recreation Area. This stipulation applies to all phases of oil and gas operations and at all sites and facilities.	Mitigate noise levels so there is no change in the natural ambient sound as recorded in Canyonlands National Park or Glen Canyon National Recreation Area. This stipulation applies to all phases of oil and gas operations and at all sites and facilities.	Same as Alternative B.

**Table 2–12. Wildlife and Fisheries**

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
<b>Objectives</b> Maintain, protect, and enhance habitats to support natural wildlife diversity, reproductive capability, and a healthy, self-sustaining population of wildlife and fish species. Manage crucial, high-value, and unfragmented habitats as management priorities.				
<b>Management Actions by Alternative</b>				
WL-1	<i>Price:</i> The Price RMP does not include any oil and gas stipulations related to pronghorn habitat. <i>Richfield RMP:</i> The Richfield RMP includes a stipulation that restricts surface disturbing	Apply a TL stipulation restricting surface disturbing activities in crucial pronghorn antelope habitat from May 15 through June 15 to protect the species during sensitive fawning seasons (Map 2-14).	Same as Alternative B.	Same as Alternative B.

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
	activities in crucial pronghorn antelope habitat from May 15 through June 15 to protect the species during sensitive fawning seasons. However, according to the Richfield RMP, there are no mapped protected wildlife habitats (Richfield RMP Map 8) in the SRD MLP area.	In addition, apply BMPs for the protection of pronghorn during oil and gas development ( <b>Appendix C</b> ).		
WL-2	No similar action.	<p>Apply a lease notice to inform the lessee/operator that compensatory mitigation may be required for all disturbances in crucial pronghorn habitat. Mitigation should be planned to offset the loss of habitat directly and indirectly affected by oil and gas operations.</p> <p>Offset the loss of important habitat by completing rehabilitation and enhancement projects in appropriate locations in the region or landscape.</p> <p>Habitat rehabilitation and enhancement projects may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Water developments Springs/seeps;</li> <li>• Wetland development Ponds/reservoirs;</li> <li>• Big game guzzlers;</li> <li>• Vegetation Enhancement</li> <li>• Wells/windmills for wildlife waters;</li> </ul>	Same as Alternative B.	Same as Alternative B.

Decision	Alternative A (No Action)	Alternative B	Alternative C	Alternative D
		<ul style="list-style-type: none"> <li>• Seeding and planting of grasses and shrubs;</li> <li>• Fencing or fencing upgrades to protect or enhance wildlife habitats; or</li> <li>• Reclamation of previous disturbances, such as undesignated routes.</li> </ul>		